

## **DIGITAL FOCUS LENS SYSTEM**

### **ABSTRACT OF THE DISCLOSURE**

A digital focus lens systems that can provide an optical system with a plurality of selectable focal powers is described. The system includes a number of switchable elements, each of which is capable of being switched between a first state and a second state. Whereby the states represent focal powers. The switchable elements may be arranged coaxially in a stack such that each of them may contribute to a cumulative focal power of the system. If, for example, the system includes two such switchable elements, four focal powers for the lens system may be selected by appropriate choice the states of each switchable element. Digital telescopes, cameras, microscopes, and other optical instruments may be implemented using such digital focus lens systems. Methods of fabricating switchable elements and methods of controlling digital lens systems are also disclosed.